

## Claims

What is claimed is:

5    1. A method comprising:

reading position error signals of a first head for non-consecutive revolutions to obtain position error signal data; and

combining the position error signal data to obtain an estimate of repeatable runout for the first head.

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2. The method of claim 1, further comprising:

reading a position error signal of another head for at least one additional revolution of the disc drive, wherein the at least one additional revolution of the disc drive takes place between the non-consecutive  
15 revolutions.

3. The method of claim 1, wherein the estimate of repeatable runout for the first head is obtained by combining the position error signal data with additional position error signal data for the first head.

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4. The method of claim 1, wherein the position error signal data are combined by averaging.

5. The method of claim 1, further comprising:

25        recording the estimate of repeatable runout for the first head for use in repeatable runout compensation.

6. The method of claim 5, wherein the estimate of repeatable runout for the first head is recorded on a disc surface.

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7. The method of claim 5, wherein the estimate of repeatable runout for the first head is recorded in a memory.

8. A method comprising:

- 5           (a) concurrently writing test data to a track on a surface of a disc in the disc drive while reading a position error signal corresponding to the track to obtain a sample of read-position position error signal data;
- (b) repositioning a head so as to make it possible to read the test data back from the track;
- 10          (c) concurrently reading the test data from the track while reading a position error signal corresponding to the track to obtain a sample of write-position position error signal data; and
- iteratively executing (a), (b), and (c) until a sufficient number of samples of read-position position error signal data and write-position
- 15          position error signal data have been obtained;
- combining the samples of read-position position error signal data to obtain an estimate of repeatable runout for the track in a read position; and
- combining the samples of write-position position error signal data to obtain an estimate of repeatable runout for the track in a write position.

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9. The method of claim 8, wherein samples of position error signal data are combined by averaging.

10. The method of claim 8, further comprising:

- 25           recording the estimates of repeatable runout for the track in the write position and in the read position for subsequent use in repeatable runout compensation.

11. The method of claim 10, wherein the estimates of repeatable runout for the track in the write position and in the read position are recorded on a disc surface.
- 5 12. The method of claim 10, wherein the estimates of repeatable runout for the track in the write position and in the read position are recorded in a memory.
13. An apparatus comprising:
- 10       a storage medium having at least one recording surface that includes position information;
- a transducer associated with the one recording surface, wherein a position error signal is generatable when the position information is read by the transducer;
- 15       a moveable assembly upon which the transducer is mounted, wherein a range of mobility of the moveable assembly allows the transducer to be positioned as necessary to allow the transducer to follow a path on the recording surface; and
- control circuitry adapted to estimate repeatable runout by
- 20       performing actions that include:
- reading position error signals of the transducer for non-consecutive revolutions to obtain position error signal data; and
- combining the position error signal data to obtain an estimate of repeatable runout for the transducer.
- 25 14. The apparatus of claim 13, wherein the control circuitry is adapted to perform an additional action of:
- reading a position error signal of another transducer for at least one additional revolution of the storage medium, wherein the at least one

additional revolution of the storage medium takes place between the non-consecutive revolutions of the storage medium.

15. The apparatus of claim 13, wherein the estimate of repeatable runout  
5 for the transducer is obtained by combining the position error signal data additional position error signal data for the transducer.

16. The apparatus of claim 13, wherein the position error signal data are combined by averaging.

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17. The apparatus of claim 13, further comprising:  
recording the estimate of repeatable runout for the transducer for use in repeatable runout compensation.

15 18. The apparatus of claim 17, wherein the estimate of repeatable runout for the transducer is recorded on at least one of the recording surfaces.

19. The method of claim 17, wherein the estimate of repeatable runout for the first transducer is recorded in a memory.

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20. The method of claim 13, wherein the control circuitry includes a microprocessor.